User Manual

VIP 1 Voice Processor
version 1.3

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welcome!

We congratulate you on your purchase of the VIP 1 Voice Processor and heartily welcome you to the steadily growing family of VIP 1users throughout the world.

We are certain that the VIP 1 will meet your high requirements. Please read through this instruction manual carefully, so that you can take optimal advantage of all the capabilities of the instrument.

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Before You Begin

⚠ Safety Tips

- Please don't expose the instrument to rain or moisture. In this way you will avoid the danger of fire and of electric shock.
- Please don't open the case. Always leave servicing and repairs to an expert.
- If liquid or a solid object should get into the case, please unplug the instrument from the power outlet and have it checked by an expert before you use it again.
- When it is not in use for extended periods of time disconnect the instrument from the power outlet. When pulling out the power supply cable please take hold of the plug and never the cable itself. Even when it is turned off, the instrument is not completely separated from the power circuit as long as the power cord is still plugged into the wall socket.

⚠ Setup

- Make sure that there is enough air circulation to avoid internal heat accumulation.
- Don't place the instrument near heat sources such as heaters and warm air vents, and don't expose it to direct sunlight, dust, excessive mechanical vibration, or impacts.
- Don't place any heavy objects on the instrument.
- If you have additional questions or problems with respect to the instrument, please consult your dealer or Yellowtec directly.

⚠ Before Turning it On

Before you plug the VIP 1 into the circuit, please check whether the voltage setting (220 V) given on the instrument matches your local voltage.

Please note that the instrument can be damaged if the voltage does not match the local current and you turn it on anyway.

The VIP 1 is turned on and off with the switch located in the connector panel on the back of the instrument.

After it is turned on, the VIP 1 automatically checks its electronics. Then "Yellowtec Voice Processor" appears on the display along with the current software version, and the LED overthe button "Preset 1" lights up.

After it is turned on, the instrument automatically from RAM loads the last preset which was invoked. If you are using the instrument for the first time, the display shows one of the three test presets that are found on the Chip Card.

Brief Description

The VIP 1 from Yellowtec is the first voice processor which stores sound data on a Chip Card once it has been set. Thus you have your own personal sound a la carte, ready to use any time and any place, fast and problem-free.

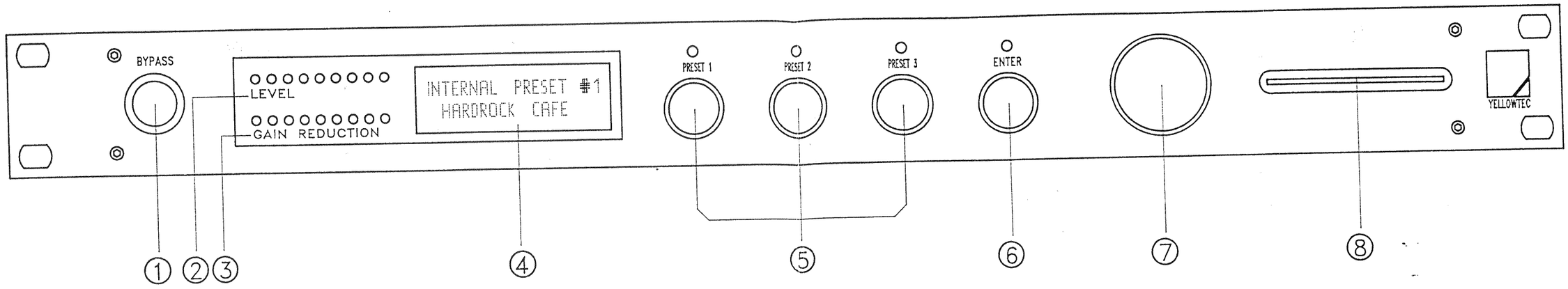
The VIP 1 was first conceived for the area of broadcasting, but is just as suited for use in video, post-production, or recording studios, in the theater, and on the stage.

With the VIP 1 you can adjust your voice optimally, because the instrument works with digitally controlled parameters, which guarantee precise sound processing of your voice.

In the development of the VIP 1 we have placed special importance on simple and user-friendly operation. The entire voice adjustment, for example, can be done with only one button and the jog wheel and then stored on your personal sound card. There is no tiresome readjustment of the voice before every recording or every transmission.

Chapter 1 VIP at a Glance

Front View



① **Bypass Switch**
Turn off the tone regulator of the voice processor. You can hear your voice as it sounds without processing. Any amplification set in the Mic/Line In is retained.

② **Level Indicator**
Shows the in- and output level related to the dip switches set on the back of the VIP-1.

③ **Gain Reduction Indicator**
Shows the Expander, Compressor, and De-Esser reduction.

④ **LC Display**
Shows with which preset you are working at the moment. While programming your sound data, you can follow each step on the display.

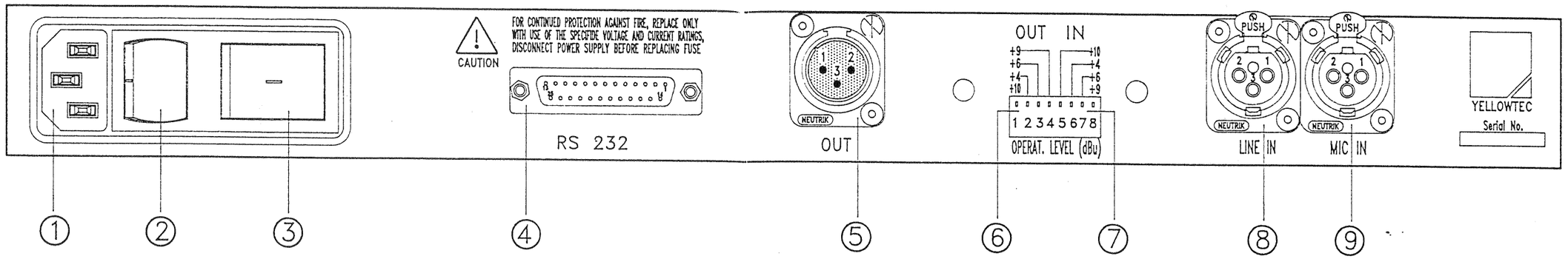
⑤ **PRESET Buttons 1-3**
For call-up of the sound data stored on the chip card or internally. On the display you can see immediately which preset you have just called up.

⑥ **ENTER Button**
To step through the function, parameter, and adjustment levels as well as to save your data.

⑦ **Jog Wheel**
By turning the jog wheel you can select from among different parameters or adjustments within the same function level.

⑧ **Slot for the Chip Card**
The chip card is always inserted with the chip facing up until it comes to a stop and then locks in place.

Rear View



① Power Cable Connector

② Power Switch

③ Voltage Selection Switch with Integrated Fuse Protection

④ RS 232 Interface

⑤ Output

⑥ Operation Level for Output (DIP Switches -10, +4, +6, +9 dB)

⑦ Operation Level for Input (DIP Switches -10, +4, +6, +9 dB)

⑧ Line In Electronically Symmetrical (Transformer-Balancing Optional)

⑨ Mic In Electronically Symmetrical (Transformer-Balancing Optional)

Chapter 2 Working with the VIP

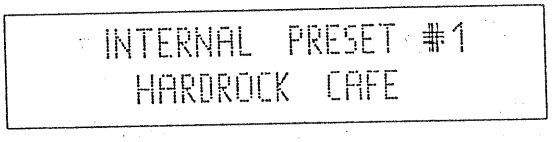
Call-up of Sound Data

When you turn on the instrument, the last preset called up always appears from the RAM of the VIP-1.

▶ **Here is how you call up your sound data from the chip card:**

- **Insert your Personal Sound Card into the slot of the instrument with the chip facing up.**
  The card must be inserted until it comes to a stop, otherwise the VIP-1 cannot read the information on the chip.

- **By briefly pressing PRESET buttons 1-3 you can now very simply load the data from your card.**
  The illuminated LED above the corresponding PRESET button shows you which preset you have just activated. Moreover, the preset title and name of the cardholder appear in the display.



Each of the presets that you have called up in this manner is now stored in the RAM of the VIP-1, and you can now withdraw your card again.

Your data remains stored until another chip card is inserted into the instrument, and your stored preset is overwritten by calling up a new version. This also holds true for a power outage.

Hint:

If the instrument should not function in the described manner, simply p ress any PRESET button longer than 5 sec. In this way you will activate the presets established by the manufacturer, which are filed in EPROM f or safety purposes. These settings are not volatile, but can be overwritten over with card presets at any time.

Programming

▶ **This is how you program your personal sound data:**

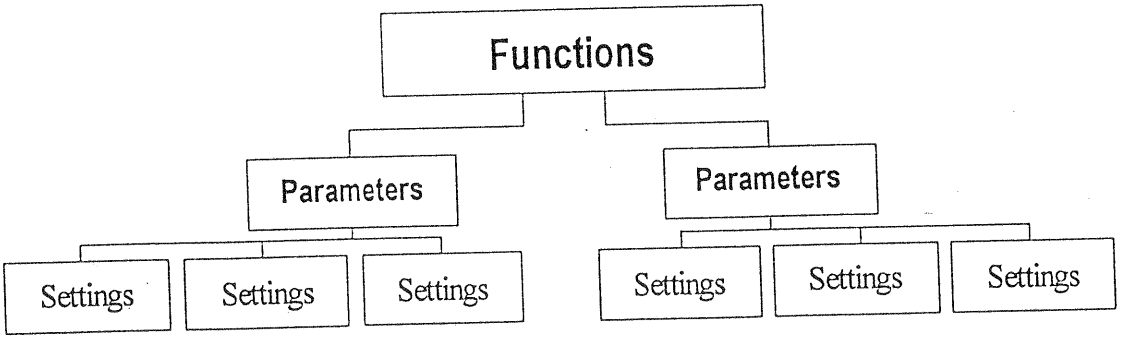
■ **Select one of the three presets which you would like to edit by pressing its button.**
The LED above the selected preset lights up, and the preset number and the name of the stored version appear on the display.

■ **With the ENTER button and the jog wheel you can now undertake the complete programming.**

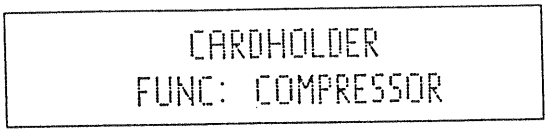
Hint: *The jog wheel can be operated by turning the wheel to the right or the left.*

For the ENTER button you have three different variations of operation:
1 brief press: you reach the next lower menu level and set the parameters
2 brief presses: you reach the next higher menu level
1 long press: you store the data on your personal sound card after conclusion of the programming

The complete adjustment of the sound data takes place via the function, parameter, and settings levels.



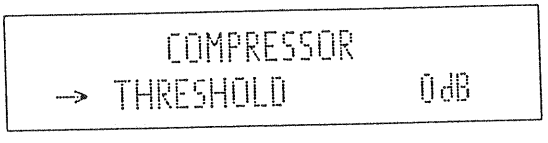
Briefly press the ENTER button one time and you will first reach the function level. By turning the jog wheel you can select the function that you would like to process.



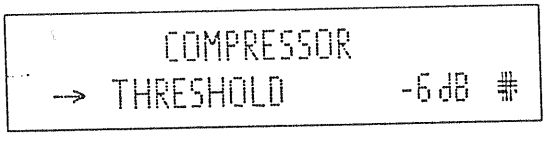
The following functions are available to you:

- **High-Pass Filter**
  (for damping impact sounds)
- **De-Esser**
  (for suppressing hissing sounds)
- **Parametric 3-Band-EQ**
  (for modifying sounds with adjustable filter skirt steepness)
- **Expander**
  (for improving dynamics)
- **Compressor**
  (for controlling dynamics with Max Gain and Hold Level)
- **Limiter**
  (for signal limitation)
- **Meter Switching**
  (for switching the display between the input and output level)
- **Mic- and Line Amplifier***
  (for turning on the microphone preamplifier)

■ **If you have selected the function that you wish to change, briefly press the ENTER button again and in this way you arrive at the next processing step.**
With the aid of the jog wheel you can select among the individual parameters within a function (e.g., threshold, range, release time, etc.)

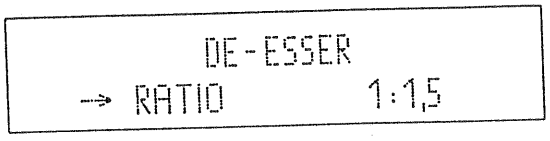


■ **The last level is the settings level. You reach it by pressing the ENTER button again.**
With the jog wheel select the value to be changed, confirm it with a brief press of the ENTER button, and simply change it with the jog wheel.



■ **With the ENTER button you can lock in any value.**
You can now either select another value from the settings level with the jog wheel and process, or by briefly pushing ENTER twice, go back to the starting menu.

The display shows you at all times on which of the three levels you are working (1st line) and which parameter you are presently adjusting (2nd line).



For your additional control the LED of the preset that you are presently working on remains lit during the entire adjustment of the data. Also the LED of the ENTER button blinks until you have stored the altered data on your chip card.

Before we store the data, we will give you below an overview of the functions, parameters and setting options of the VIP 1.

Functions, Parameters and Settings of the VIP 1

Function Level	Parameter Level	Settings Level
High-pass (low rejection filter)	N/A	on/off
De-Esser	Threshold Ratio Frequency	2-dB increments from -30 to 0dB 1:1 (off); 1:1.5; 1:2; 1:3; 1:5 5000Hz; 6300Hz; 8000Hz, 10000Hz, 12500Hz
Filter High (high-range filter)	Gain (Amplification) Q Factor (Quality) Frequency	1-dB increments from -10 to +10 dB, 0 dB= off 0.25; 1.25; 3 31 increments (1/6 oct.) from 520 to 16250 Hz
Filter Mid (mid-range filter)	Gain (Amplification) Q Factor (Quality) Frequency	1-dB increments from -10 to +10 dB, 0 dB= off 0.25; 1.25; 3 31 increments (1/6 oct.) from 200 to 6250 Hz
Filter Low (low-range filter)	Gain (Amplification) Q Factor (Quality) Frequency	1-dB increments from -10 to +10 dB, 0 dB= off 0.25; 1.25; 3 31 increments (1/6 oct.) from 40 to 1250 Hz
Expander	Threshold Ratio Range Release	2-dB increments from -40 to -10dB 1:1(off); 1:1.5; 1:3; Gate 2-dB increments from -2 to -50dB 175 ms; 350 ms; 700 ms; 1.4 s
Compressor	Threshold Ratio Max Gain Holdlevel Release Att/Rel	1-dB increments from -20 to 0dB 1:1(off); 1:2; 1:5; 1:20 0; low; medium; high low; medium; high 250ms; 500 ms; 1s; 2 s auto on / off
Limiter	N/A	on/off
Meter	Level Gain Red.	In-/Output-Level Comp/Exp; De-Esser
Mic/Line In	Input Line Gain (Ampl.) *Mic Gain (Ampl.)	Line-In; *Mic-In 1-dB increments from -10dB to +10dB 10-dB increments from 0 to 60dB

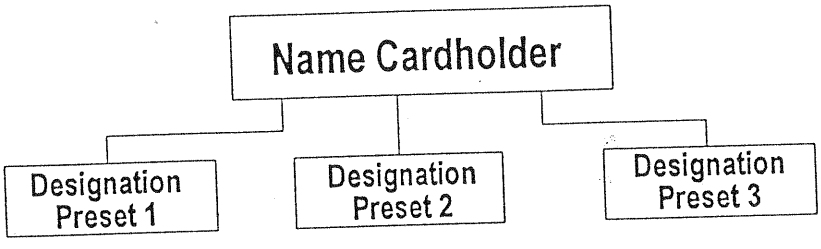
* optional

Storage

The functions you have edited can be very simply stored on the Personal Sound Card.

▶ **This is how you store the adjusted data on the Chip Card**

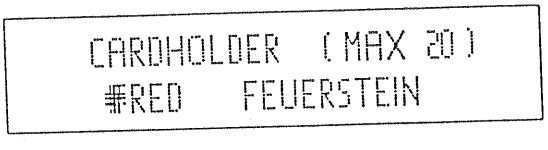
■ **Press the ENTER button once for longer than 2 seconds in order to reach the storage mode.**
It makes no difference what level you are on, the VIP-1 will automatically go-from any position automatically into the storage mode.
Now you can enter the Cardholder, Preset Title, and Preset Number in the second line of the display with the jog wheel and ENTER button.



Hint:

In the storage mode you always go to the next level (Preset Title, Preset Number) with one long press on ENTER.
Within one storage level you can move to any location with the jogwheel and activate it with one brief press on ENTER. The blinking cursor shows you that you can now make a change.

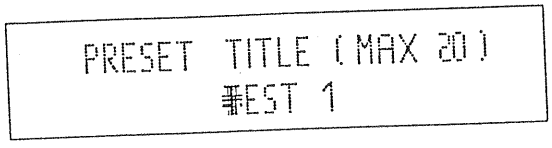
■ **You can therefore change the existing entries in the following manner:**
With one brief press on ENTER you come to the first position of the CARDHOLDER.
The blinking cursor shows you that you can now make a change.



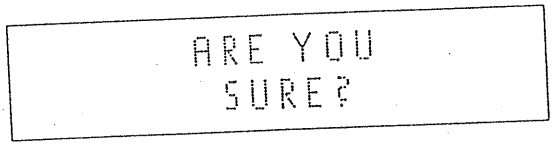
■ **By turning the jog wheel you can reach any letter, any number, and the special characters.**
All input fields are alphanumeric created. With one brief ENTER the respective

character is set. The VIP-1 accepts the CARDHOLDER, once it is established, for all three presets on a chip card, so that you can simply skip this level in storing the two other presets (one long ENTER).

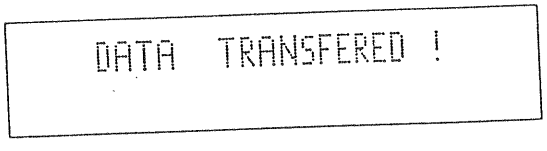
- **You change the PRESET TITLE and the PRESET NUMBER in the same way.**



- **When you have completed your settings, press long once on the ENTER button in order to store your data.**
  On the display will appear:



- **If you once again press long on the ENTER button, your data will be accepted in memory.**
  The VIP-1 exits storage with:



You can interrupt the storage process at any time with a double click, and the VIP-1 will then return level by level. Your set data remain in the RAM of the VIP-1 until you insert a new card into the instrument and overwrite your edited data by calling up a new preset.

Additional Functions

Internal Presets

For your security in every VIP-1 three internal presets are filed in EPROM, which you can access at any time.

You can reach these internal presets by simply holding down the corresponding PRESET button for more than 5 seconds. You return to your own settings as soon as you insert your Personal Sound Card, and briefly press one of the three PRESET buttons.

Normally you do not need the internal presets, since the VIP-1 retains your personal settings even after the power supply is turned off.

Bypass Function

With the BYPASS button you can examine the effect of the VIP-1 on your voice at any time: In the Bypass mode the signal is led directly via a relay from the input to the output, so that you can hear your voice without any processing. Any amplification set in the Mic-/Line In is retained. If you press the BYPASS button again, you will arrive back at the starting menu.

Chapter 3 Technical Data

Overview

Line Input

-Electronically balanced
-Maximum input level: +22 dbu
-Input impedance: 12 kohm (1 KHz)
-Frequency response: +/-0.8 dB (20 Hz - 20 KHz)
-Signal-to-noise ratio WTD (10 Hz CCIR-RMS), relative to the +4 dbu output level: -85 dB
-Distortion @ 0 dbu: < 0.02% @ 1 KHz

Line Output

-Electronically balanced
-Maximum output level: +22 dbu
-Output impedance: 600 ohm

Dimensions

430 (wide) x 44 (high) x 284 (deep) mm

Weight

5 kg (net)

Power Supply

110/230 VAC
50/60 Hz

Chip Card

ISO-4488, 512 byte

Hardware

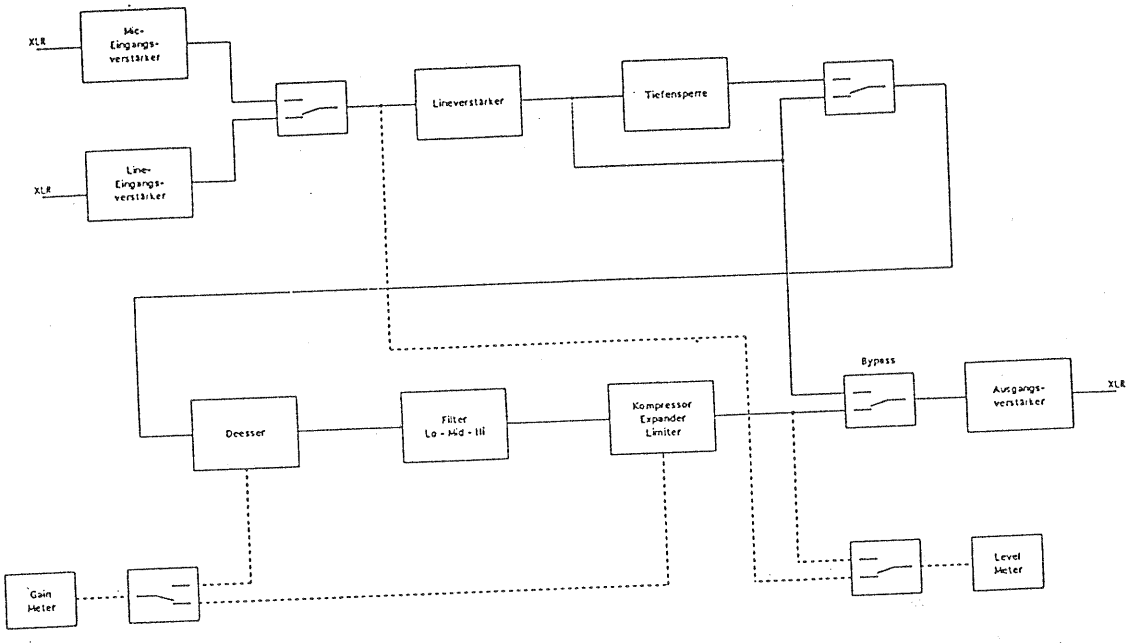
- Line input XLR - 3F (electronically balanced)
- Output XLR - 3M (electronically balanced)
- Power supply (EURO) with voltage selection (110-240 V) and fused protection
- RS-232 interface
- Line input level adjustable with DIP switches to -10, +4, +6, and +9 dbu, corresponding to 0 Vu display
- Line output level adjustable with DIP switches to -10, +4, +6, and +9 dbu, corresponding to 0 Vu display
- Transformer-balanced in-/outputs*
- Microphone preamplifier, 70 db amplification* (60 dB microphone preamplification, 10 dB line amplification)

Functions

- Employable high-pass filter
- De-Esser controllable in frequency, ratio, and threshold
- Three-step parametric equalizer controllable in gain, Q factor, and frequency
- Expander with ratio 1:1 to 3:1 or gate function controllable in threshold, range, and release time
- Compressor with ratio 1:1 to 1:20, controllable in threshold, max gain, hold level, and release time with additional auto attack
- Additional limiter (at 3 dB above the in-/output level set with the DIP switch)
- Level indicator switchable for in- or output level
- Level indicator switchable for compressor, expander, limiter, or de-Esser

**option*

Block Diagram



Chapter 4 Appendix - Listing of the Parameters

For your information, we will show you below the factory settings for all of the parameters to encourage you to make your own personal settings.

We have also enclosed a blank form on which you can write down your settings. You can simply copy this page.

Internal Preset 1

Soundname: *Hardrock Cafe*

High-pass (low rejection filter)	N/A	☐ on ☒ off
De-Esser	Threshold	0 dB (2-dB increments from -30 to 0dB)
	Ratio	☒ 1:1 = off ☐ 1:1.5 ☐ 1:2 ☐ 1:3 ☐ 1:5
	Frequency	☐ 5 KHz ☐ 6.3KHz ☐ 8 KHz ☐ 10 KHz ☒ 12.5 kHz
Filter High (high-range filter)	Gain (Amplification)	+1 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☒ 1.25 ☐ 3
	Frequency	10.4 31 increments (1/6 Oct.) from 520 Hz to 16,25 KHz
Filter Mid (mid-range filter)	Gain (Amplification)	+8 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	4 31 increments (1/6 Oct.) from 200 Hz to 6,25 KHz
Filter Low (low-range filter)	Gain (Amplification)	+5 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	90 31 increments (1/6 Oct.) from 40 Hz to 1,25 KHz
Expander	Threshold	-32 dB (2-dB increments from -40 to -10dB)
	Ratio	☒ 1:1 = off ☐ 1.5:1 ☐ 3:1 ☐ Gate
	Range	-20 dB (2-dB-increments from -2 to -50dB)
	Release	☐ 175 ms ☒ 350 ms ☐ 700 ms ☐ 1.4 s
Compressor	Threshold	-2 dB (1-dB increments from -20 to 0dB)
	Ratio	☐ 1:1 = off ☒ 1:2 ☐ 1:5 ☐ 1:20
	Max Gain	☐ 0 ☐ low ☒ medium ☐ high
	Hold Level	☐ low ☒ medium ☐ high
	Release	☒ 250 ms ☐ 500 ms ☐ 1 s ☐ 2s
	Att/Rel	☒ auto on ☐ auto off
Limiter	N/A	☐ on ☒ off
Meter	Level	☐ Output-Level ☒ Input-Level
	Gain Red.	☒ Comp/Exp/Lim VCA ☐ De-Esser VCA
Mic/Line Amp	Input	☐ Mic-In* ☒ Line-In
	Line Gain (Amp.)	+3 (1-dB increments from -10dB to +10dB)
	Mic Gain* (Amp.)	dB (10-dB increments from 0 to 60dB)

* optional erhältlich

Internal Preset 2

Soundname: News

High-pass (low rejection filter)	N/A	☒ on ☐ off
De-Esser	Threshold	-6 dB (2-dB increments from -30 to 0dB)
	Ratio	☐ 1:1 = off ☒ 1:1.5 ☐ 1:2 ☐ 1:3 ☐ 1:5
	Frequency	☐ 5 KHz ☐ 6.3KHz ☒ 8 KHz ☐ 10 KHz ☐ 12.5 kHz
Filter High (high-range filter)	Gain (Amplification)	+3 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☒ 3
	Frequency	7.8 31 increments (1/6 Oct.) from 520 Hz to 16,25 KHz
Filter Mid (mid-range filter)	Gain (Amplification)	+8 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	4 31 increments (1/6 Oct.) from 200 Hz to 6,25 KHz
Filter Low (low-range filter)	Gain (Amplification)	-2 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	900 31 increments (1/6 Oct.) from 40 Hz to 1,25 KHz
Expander	Threshold	-40 dB (2-dB increments from -40 to -10dB)
	Ratio	☐ 1:1 = off ☐ 1.5:1 ☐ 3:1 ☒ Gate
	Range	-22 dB (2-dB-increments from -2 to -50dB)
	Release	☐ 175 ms ☒ 350 ms ☐ 700 ms ☐ 1.4 s
Compressor	Threshold	-5 dB (1-dB increments from -20 to 0dB)
	Ratio	☐ 1:1 = off ☒ 1:2 ☐ 1:5 ☐ 1:20
	Max Gain	☐ 0 ☐ low ☒ medium ☐ high
	Hold Level	☐ low ☒ medium ☐ high
	Release	☐ 250 ms ☒ 500 ms ☐ 1 s ☐ 2s
	Att/Rel	☐ auto on ☒ auto off
Limiter	N/A	☐ on ☒ off
Meter	Level	☐ Output-Level ☒ Input-Level
	Gain Red.	☒ Comp/Exp/Lim VCA ☐ De-Esser VCA
Mic/Line Amp	Input	☐ Mic-In* ☒ Line-In
	Line Gain (Amp.)	+6 (1-dB increments from -10dB to +10dB)
	Mic Gain* (Amp.)	dB (10-dB increments from 0 to 60dB)

* optional erhältlich

Internal Preset 3

Soundname: *Big Voice*

High-pass (low rejection filter)	N/A	☐ on ☒ off
De-Esser	Threshold	-4 dB (2-dB increments from -30 to 0dB)
	Ratio	☒ 1:1 = off ☐ 1:1.5 ☐ 1:2 ☐ 1:3 ☐ 1:5
	Frequency	☐ 5 KHz ☐ 6.3KHz ☒ 8 KHz ☐ 10 KHz ☐ 12.5 kHz
Filter High (high-range filter)	Gain (Amplification)	+8 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	11.7 31 increments (1/6 Oct.) from 520 Hz to 16,25 KHz
Filter Mid (mid-range filter)	Gain (Amplification)	-3 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☒ 3
	Frequency	1.375 31 increments (1/6 Oct.) from 200 Hz to 6,25 KHz
Filter Low (low-range filter)	Gain (Amplification)	+7 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	110 31 increments (1/6 Oct.) from 40 Hz to 1,25 KHz
Expander	Threshold	-10 dB (2-dB increments from -40 to -10dB)
	Ratio	☒ 1:1 = off ☐ 1.5:1 ☐ 3:1 ☐ Gate
	Range	-30 dB (2-dB-increments from -2 to -50dB)
	Release	☐ 175 ms ☒ 350 ms ☐ 700 ms ☐ 1.4 s
Compressor	Threshold	0 dB (1-dB increments from -20 to 0dB)
	Ratio	☒ 1:1 = off ☐ 1:2 ☐ 1:5 ☐ 1:20
	Max Gain	☐ 0 ☐ low ☐ medium ☒ high
	Hold Level	☐ low ☒ medium ☐ high
	Release	☐ 250 ms ☒ 500 ms ☐ 1 s ☐ 2s
	Att/Rel	☒ auto on ☐ auto off
Limiter	N/A	☐ on ☒ off
Meter	Level	☐ Output-Level ☒ Input-Level
	Gain Red.	☒ Comp/Exp/Lim VCA ☐ De-Esser VCA
Mic/Line Amp	Input	☐ Mic-In* ☒ Line-In
	Line Gain (Amp.)	0 (1-dB increments from -10dB to +10dB)
	Mic Gain* (Amp.)	dB (10-dB increments from 0 to 60dB)

* optional erhältlich

Chip Card Preset 1 (factory-supplied chip card)

Soundname: Disco 5

High-pass (low rejection filter)	N/A	☐ on ☒ off
De-Esser	Threshold	-30 dB (2-dB increments from -30 to 0dB)
	Ratio	☒ 1:1 = off ☐ 1:1.5 ☐ 1:2 ☐ 1:3 ☐ 1:5
	Frequency	☒ 5 KHz ☐ 6.3KHz ☐ 8 KHz ☐ 10 KHz ☐ 12.5 kHz
Filter High (high-range filter)	Gain (Amplification)	+2 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☒ 3
	Frequency	14.3 31 increments (1/6 Oct.) from 520 Hz to 16,25 KHz
Filter Mid (mid-range filter)	Gain (Amplification)	-3 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☒ 3
	Frequency	300 31 increments (1/6 Oct.) from 200 Hz to 6,25 KHz
Filter Low (low-range filter)	Gain (Amplification)	+4 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☒ 1.25 ☐ 3
	Frequency	40 31 increments (1/6 Oct.) from 40 Hz to 1,25 KHz
Expander	Threshold	-20 dB (2-dB increments from -40 to -10dB)
	Ratio	☐ 1:1 = off ☒ 1.5:1 ☐ 3:1 ☐ Gate
	Range	-10 dB (2-dB-increments from -2 to -50dB)
	Release	☐ 175 ms ☐ 350 ms ☐ 700 ms ☐ 1.4 s
Compressor	Threshold	0 dB (1-dB increments from -20 to 0dB)
	Ratio	☐ 1:1 = off ☐ 1:2 ☒ 1:5 ☐ 1:20
	Max Gain	☐ 0 ☐ low ☒ medium ☐ high
	Hold Level	☒ low ☐ medium ☐ high
	Release	☒ 250 ms ☐ 500 ms ☐ 1 s ☐ 2s
	Att/Rel	☒ auto on ☐ auto off
Limiter	N/A	☐ on ☒ off
Meter	Level	☒ Output-Level ☐ Input-Level
	Gain Red.	☒ Comp/Exp/Lim VCA ☐ De-Esser VCA
Mic/Line Amp	Input	☐ Mic-In* ☒ Line-In
	Line Gain (Amp.)	0 (1-dB increments from -10dB to +10dB)
	Mic Gain* (Amp.)	dB (10-dB increments from 0 to 60dB)

* optional erhältlich

Chip Card Preset 2 (factory-supplied chip card)

Soundname: *FM-Sound*

High-pass (low rejection filter)	N/A	☐ on ☒ off
De-Esser	Threshold	-30 dB (2-dB increments from -30 to 0dB)
	Ratio	☒ 1:1 = off ☐ 1:1.5 ☐ 1:2 ☐ 1:3 ☐ 1:5
	Frequency	☒ 5 KHz ☐ 6.3KHz ☐ 8 KHz ☐ 10 KHz ☐ 12.5 kHz
Filter High (high-range filter)	Gain (Amplification)	+8 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	6.5 31 increments (1/6 Oct.) from 520 Hz to 16,25 KHz
Filter Mid (mid-range filter)	Gain (Amplification)	+6 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☒ 3
	Frequency	1.0 31 increments (1/6 Oct.) from 200 Hz to 6,25 KHz
Filter Low (low-range filter)	Gain (Amplification)	-10 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☒ 3
	Frequency	500 31 increments (1/6 Oct.) from 40 Hz to 1,25 KHz
Expander	Threshold	-18 dB (2-dB increments from -40 to -10dB)
	Ratio	☒ 1:1 = off ☐ 1.5:1 ☐ 3:1 ☐ Gate
	Range	-44 dB (2-dB-increments from -2 to -50dB)
	Release	☐ 175 ms ☒ 350 ms ☐ 700 ms ☐ 1.4 s
Compressor	Threshold	-10 dB (1-dB increments from -20 to 0dB)
	Ratio	☐ 1:1 = off ☐ 1:2 ☒ 1:5 ☐ 1:20
	Max Gain	☐ 0 ☒ low ☐ medium ☐ high
	Hold Level	☒ low ☐ medium ☐ high
	Release	☒ 250 ms ☐ 500 ms ☐ 1 s ☐ 2s
	Att/Rel	☐ auto on ☒ auto off
Limiter	N/A	☒ on ☐ off
Meter	Level	☐ Output-Level ☒ Input-Level
	Gain Red.	☒ Comp/Exp/Lim VCA ☐ De-Esser VCA
Mic/Line Amp	Input	☐ Mic-In* ☒ Line-In
	Line Gain (Amp.)	+8 (1-dB increments from -10dB to +10dB)
	Mic Gain* (Amp.)	dB (10-dB increments from 0 to 60dB)

* optional erhältlich

Chip Card Preset 3 (factory-supplied chip card)

Soundname: *Telefon 1*

High-pass (low rejection filter)	N/A	☐ on ☒ off
De-Esser	Threshold	-30 dB (2-dB increments from -30 to 0dB)
	Ratio	☐ 1:1 = off ☐ 1:1.5 ☐ 1:2 ☐ 1:3 ☒ 1:5
	Frequency	☒ 5 KHz ☐ 6.3KHz ☐ 8 KHz ☐ 10 KHz ☐ 12.5 kHz
Filter High (high-range filter)	Gain (Amplification)	+10 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	3.575 31 increments (1/6 Oct.) from 520 Hz to 16,25 KHz
Filter Mid (mid-range filter)	Gain (Amplification)	-10 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	200 31 increments (1/6 Oct.) from 200 Hz to 6,25 KHz
Filter Low (low-range filter)	Gain (Amplification)	-10 dB (1-dB increments from -10 to 10dB)0 dB = off)
	Q-Factor (Quality)	☒ 0.25 ☐ 1.25 ☐ 3
	Frequency	100 31 increments (1/6 Oct.) from 40 Hz to 1,25 KHz
Expander	Threshold	-18 dB (2-dB increments from -40 to -10dB)
	Ratio	☒ 1:1 = off ☐ 1.5:1 ☐ 3:1 ☐ Gate
	Range	-44 dB (2-dB-increments from -2 to -50dB)
	Release	☐ 175 ms ☒ 350 ms ☐ 700 ms ☐ 1.4 s
Compressor	Threshold	-8 dB (1-dB increments from -20 to 0dB)
	Ratio	☐ 1:1 = off ☐ 1:2 ☐ 1:5 ☒ 1:20
	Max Gain	☐ 0 ☐ low ☒ medium ☐ high
	Hold Level	☐ low ☒ medium ☐ high
	Release	☒ 250 ms ☐ 500 ms ☐ 1 s ☐ 2s
	Att/Rel	☐ auto on ☒ auto off
Limiter	N/A	☐ on ☒ off
Meter	Level	☐ Output-Level ☒ Input-Level
	Gain Red.	☒ Comp/Exp/Lim VCA ☐ De-Esser VCA
Mic/Line Amp	Input	☐ Mic-In* ☒ Line-In
	Line Gain (Amp.)	+5 (1-dB increments from -10dB to +10dB)
	Mic Gain* (Amp.)	dB (10-dB increments from 0 to 60dB)

* optional erhältlich

Chapter 4 Appendix - The Individual Functions

In the following the individual functions and their parameters will be described in detail and graphically presented.

Compressor

The compressor provides for a constant level, i.e., with its intervention soft passages become louder and loud passages become softer.
Excessive changes in level, which give the impression of constantly fluctuating volumes, can be compressed with the compressor.

The compressor of the VIP-1 offers you the following settings options:

Threshold

The reference level at which the dynamics begin to be altered. An electronic circuit constantly monitors the input signal and compares it with a reference signal (threshold level). If theinput signal is greater than the reference level, the compressor begins to operate.

Ratio

The ratio of input to output level. At a ratio of 1:1 the compressor is not active.
A ratio of 1:5 means that if the input level is increased by 5 dB, the output level increases by 1 dB.

Max Gain™

The settings low, mid, and high approximately correspond to an expansion of ca. +3, +6, and +9 dB. With the Max Gain function you can pull soft voices „forward," and in fact below the selected threshold level (0 = off).

Hold Level

During the speaking pauses the last level is retained, thus preventing excessive pumping of the compressor.

Release

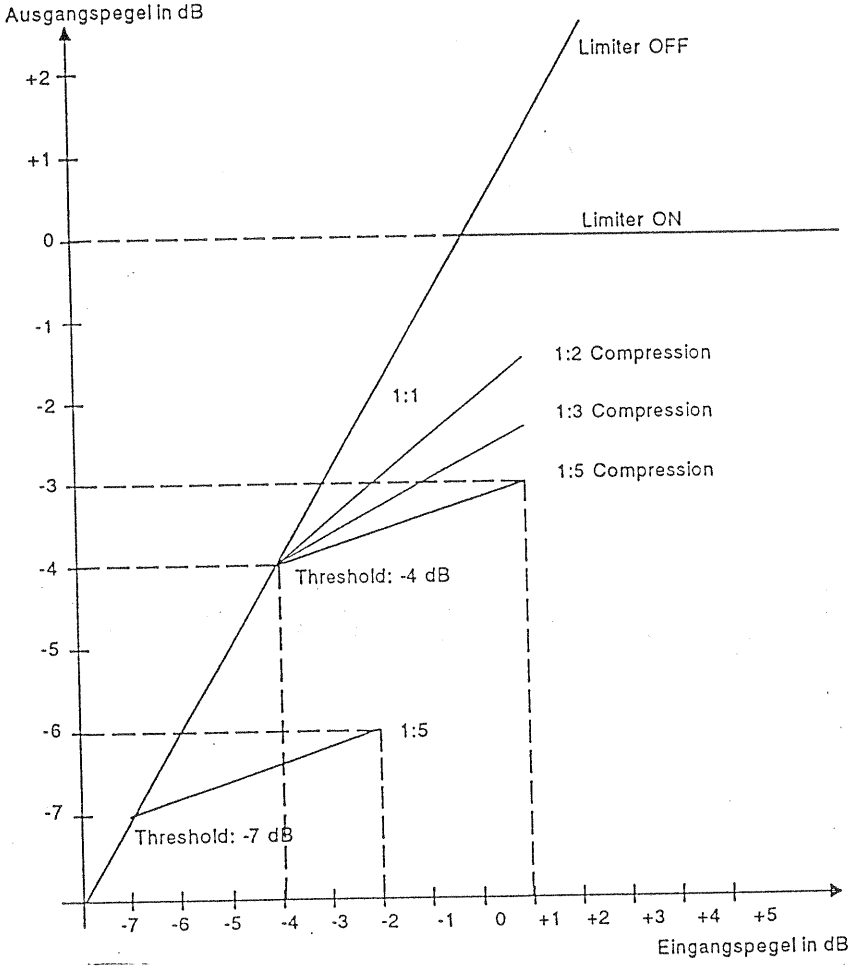
We differentiate between Attack and Release Time (build-up/decay time).
While the Attack Time is permanently set, one can choose a Release Time between 125 ms and 1 sec.

The Release Time is the time span required by the output level to return to the uncompressed state with signals that are below the selected threshold.

The selection of the correct Release Time is not unproblematic: With a Release Time that is too short, ambient noises such as „pumping" or „breathing" can be heard. If the Release Time is too long, the signal is not compressed, and the level drops.

Attack/Release

A prolonged, too-high level is adjusted by „AUTO“ to a level which is a function of the selected Release Time.



Expander

With the Expander, just as with the Compressor, one can influence the dynamics of the voice, and thus increase its comprehensibility.
Soft background noises such as the hum of air conditioners or traffic noises are suppressed in this manner.

Threshold

The expander begins to alter the dynamics below this level.

Ratio

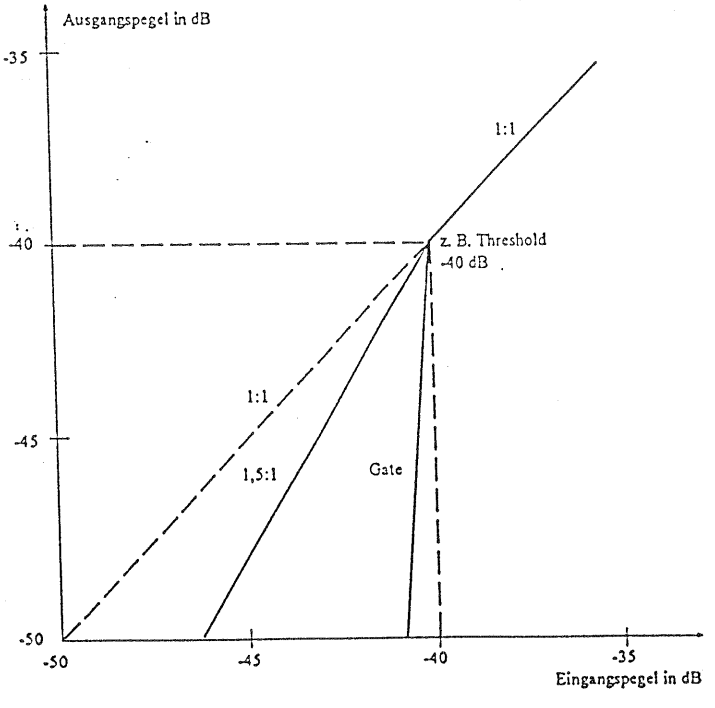
= degree of alteration.
A ratio of 1:2 means that a signal which falls by 10 dB at input drops by 20 dB at output.
With the Gate setting a very steep drop in output level is brought about. It is therefore used as a gating circuit for noise suppression during the speaking pauses.

Range

Maximum possible level reduction.

Release

The decay time that the level requires in order to return to the non-expanded state after the input signal has again risen above the threshold level. For a strong gate effect a short Release Time should be selected. Long Release Times weaken the effect of the expansion.



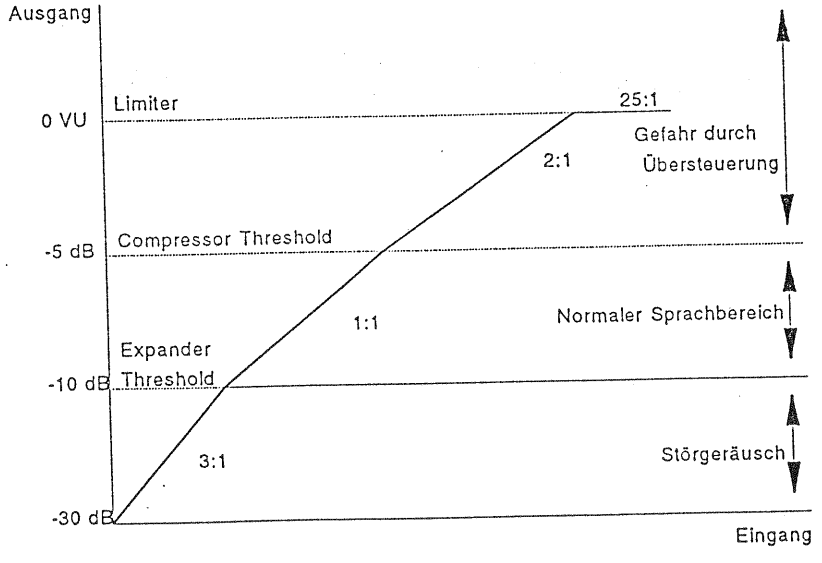
Limiter

Permanently set volume limiter. It will not allow a level higher than the set level. (Set to 0VU). The output level remains constantly at this value, regardless of how much the input level is increased.

Summary

On the basis of the following example the effect of the Limiter, Compressor, and Expander functions on the dynamics of speech is presented.

In the middle range the signal is unchanged. Above the compressor threshold the level is reduced by 2:1. Signal spikes are intercepted by the limiter at a factor of 25:1, and the level below the expander is reduced to 3:1, so that the signal is freed of ambient noise.

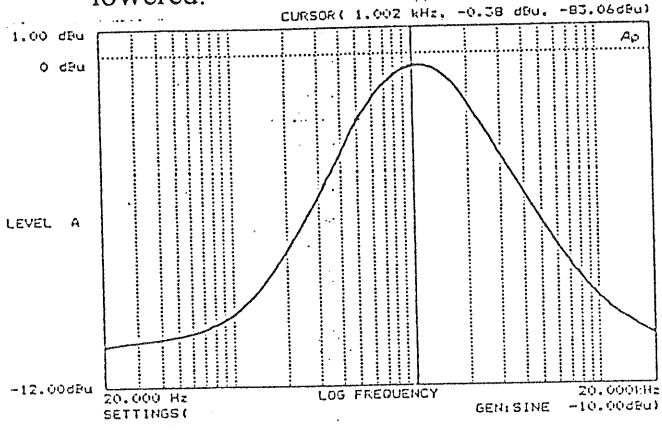


Filter High/Mid/Low

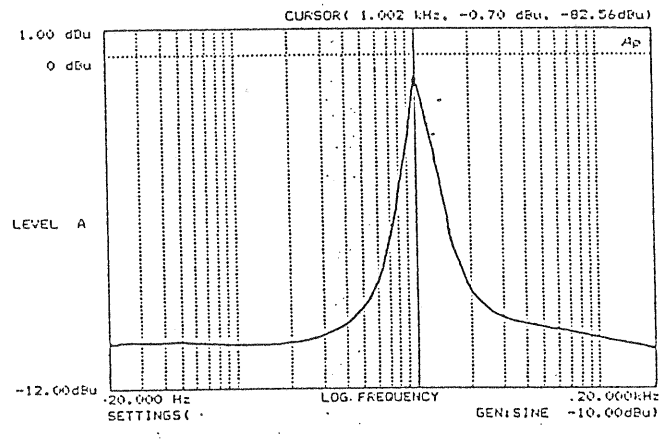
The parametric filter allows for a precise effect on the tone of your voice.

Q Factor/Quality

Selects the width of the frequency band which takes effect when the level is raised or lowered.



Q=0,5



Q=3

A Q factor of 0.5 is a broad frequency band, i.e., around the set middle frequency the neighboring frequencies are also raised or lowered. Q factor = 3 means a very narrow-band filter, which raises or lowers only the set frequency. The neighboring frequencies remain unaffected.

Gain/Amplification

The amplification or lowering can be set to =/- 10 dB with this regulator. 0 dB corresponds to a turned-off filter.

Frequency

The frequency regulator is used to set the middle frequency to be processed. The parametric filter in the VIP-1 was divided into three filter ranges, which differ only in the frequency ranges high, middle, and low.

De-Esser

The De-Esser is a controller for suppression of hissing sounds. In other words, this parameter can decrease the volume of consonants such as „S“, „Sch,“ or „T“. S sounds have in their spectral composition high dynamic frequencies with high levels, which cannot be weakened with conventional equalizers without distorting the sound.

Threshold

Permanently sets the reference level at which the suppression of hissing sounds begins.

Ratio

Ratio of input to output levels. With a ratio of 1:3, for example, a hissing sound with an input level of 3 dB is reduced to 1 dB at the output.

Frequency

This determines the frequency at which the maximum damping of the hissing sound occurs.

De-Esser

The De-Esser is a controller for suppression of hissing sounds. In other words, this parameter can decrease the volume of consonants such as „S“, „Sch,“ or „T“. S sounds have in their spectral composition high dynamic frequencies with high levels, which cannot be weakened with conventional equalizers without distorting the sound.

Threshold

Permanently sets the reference level at which the suppression of hissing sounds begins.

Ratio

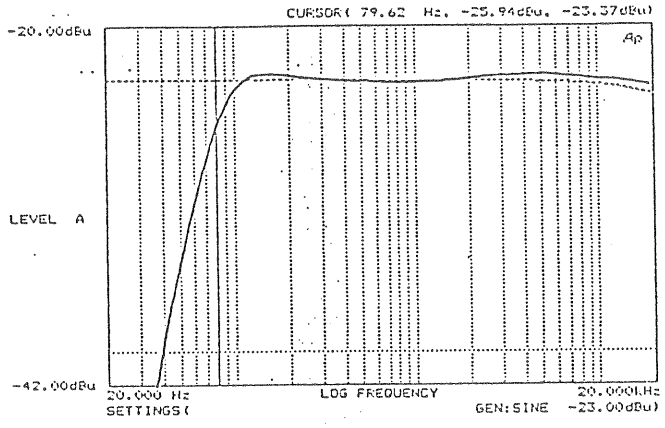
Ratio of input to output levels. With a ratio of 1:3, for example, a hissing sound with an input level of 3 dB is reduced to 1 dB at the output.

Frequency

This determines the frequency at which the maximum damping of the hissing sound occurs.

High-pass (low-rejection filter)

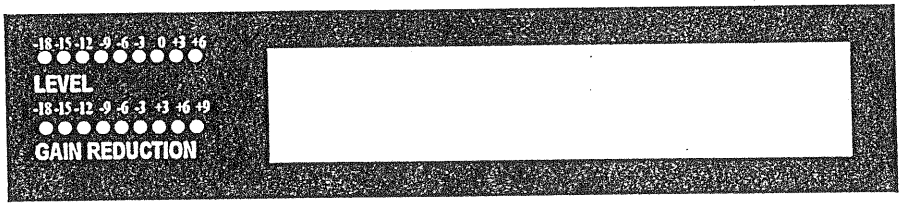
Impact sound filter for suppression of low-frequency sounds such as rumble and footstep noises. (Cut-off frequency set at 75 Hz.)



Meter

Two switchable measurement displays are integrated into the VIP-1.

The upper one gives the input or output signal with a read-out range of -18 to +6 dB (level), while on the lower read-out the level of the internal VCA can be read with a read-out range from -18 to +9 dB (-18 to -3 dB gain reduction, +3 to +9 dB expansion).



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Soundname: _____

High-pass (low rejection filter)	N/A	☐ on ☐ off
De-Esser	Threshold	☐ dB (2-dB increments from -30 to 0dB)
	Ratio	☐ 1:1 = off ☐ 1:1.5 ☐ 1:2 ☐ 1:3 ☐ 1:5
	Frequency	☐ 5 KHz ☐ 6.3KHz ☐ 8 KHz ☐ 10 KHz ☐ 12.5 kHz
Filter High (high-range filter)	Gain (Amplification)	☐ dB (1-dB increments from -10 to 10dB) 0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☐ 3
	Frequency	☐ 31 increments (1/6 Oct.) from 520 Hz to 16,25 KHz
Filter Mid (mid-range filter)	Gain (Amplification)	☐ dB (1-dB increments from -10 to 10dB) 0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☐ 3
	Frequency	☐ 31 increments (1/6 Oct.) from 200 Hz to 6,25 KHz
Filter Low (low-range filter)	Gain (Amplification)	☐ dB (1-dB increments from -10 to 10dB) 0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☐ 3
	Frequency	☐ 31 increments (1/6 Oct.) from 40 Hz to 1,25 KHz
Expander	Threshold	☐ dB (2-dB increments from -40 to -10dB)
	Ratio	☐ 1:1 = off ☐ 1.5:1 ☐ 3:1 ☐ Gate
	Range	☐ dB (2-dB-increments from -2 to -50dB)
	Release	☐ 175 ms ☐ 350 ms ☐ 700 ms ☐ 1.4 s
Compressor	Threshold	☐ dB (1-dB increments from -20 to 0dB)
	Ratio	☐ 1:1 = off ☐ 1:2 ☐ 1:5 ☐ 1:20
	Max Gain	☐ 0 ☐ low ☐ medium ☐ high
	Hold Level	☐ low ☐ medium ☐ high
	Release	☐ 250 ms ☐ 500 ms ☐ 1 s ☐ 2s
	Att/Rel	☐ auto on ☐ auto off
Limiter	N/A	☐ on ☐ off
Meter	Level	☐ Output-Level ☐ Input-Level
	Gain Red.	☐ Comp/Exp/Lim VCA ☐ De-Esser VCA
Mic/Line Amp	Input	☐ Mic-In* ☐ Line-In
	Line Gain (Amp.)	☐ (1-dB increments from -10dB to +10dB)
	Mic Gain* (Amp.)	☐ dB (10-dB increments from 0 to 60dB)

* optional erhältlich

Soundname: _____

High-pass (low rejection filter)	N/A	☐ on ☐ off
De-Esser	Threshold	☐ dB (2-dB increments from -30 to 0dB)
	Ratio	☐ 1:1 = off ☐ 1:1.5 ☐ 1:2 ☐ 1:3 ☐ 1:5
	Frequency	☐ 5 KHz ☐ 6.3KHz ☐ 8 KHz ☐ 10 KHz ☐ 12.5 kHz
Filter High (high-range filter)	Gain (Amplification)	☐ dB (1-dB increments from -10 to 10dB) 0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☐ 3
	Frequency	☐ 31 increments (1/6 Oct.) from 520 Hz to 16,25 KHz
Filter Mid (mid-range filter)	Gain (Amplification)	☐ dB (1-dB increments from -10 to 10dB) 0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☐ 3
	Frequency	☐ 31 increments (1/6 Oct.) from 200 Hz to 6,25 KHz
Filter Low (low-range filter)	Gain (Amplification)	☐ dB (1-dB increments from -10 to 10dB) 0 dB = off)
	Q-Factor (Quality)	☐ 0.25 ☐ 1.25 ☐ 3
	Frequency	☐ 31 increments (1/6 Oct.) from 40 Hz to 1,25 KHz
Expander	Threshold	☐ dB (2-dB increments from -40 to -10dB)
	Ratio	☐ 1:1 = off ☐ 1.5:1 ☐ 3:1 ☐ Gate
	Range	☐ dB (2-dB-increments from -2 to -50dB)
	Release	☐ 175 ms ☐ 350 ms ☐ 700 ms ☐ 1.4 s
Compressor	Threshold	☐ dB (1-dB increments from -20 to 0dB)
	Ratio	☐ 1:1 = off ☐ 1:2 ☐ 1:5 ☐ 1:20
	Max Gain	☐ 0 ☐ low ☐ medium ☐ high
	Hold Level	☐ low ☐ medium ☐ high
	Release	☐ 250 ms ☐ 500 ms ☐ 1 s ☐ 2s
	Att/Rel	☐ auto on ☐ auto off
Limiter	N/A	☐ on ☐ off
Meter	Level	☐ Output-Level ☐ Input-Level
	Gain Red.	☐ Comp/Exp/Lim VCA ☐ De-Esser VCA
Mic/Line Amp	Input	☐ Mic-In* ☐ Line-In
	Line Gain (Amp.)	☐ (1-dB increments from -10dB to +10dB)
	Mic Gain* (Amp.)	☐ dB (10-dB increments from 0 to 60dB)

* optional erhältlich